Claims:

1. A computerized method for monitoring for a user the price activities of a financial instrument traded in a financial market in a given timeframe, comprising:

   (a) plotting a plurality of bars on a price-time chart; said price-time chart is a two dimensional chart, with the Y-coordinates representing price and X-coordinates representing time, with the X-axis divided into a predetermined plurality of discrete intervals, each interval has a bar associated with it, each interval represents an amount of time equal to that of the given timeframe, each bar contains at least the high price and low price traded by the market during the associated time interval of the bar; and each bar is vertically displayed on said chart.

   (b) taking a bar from said chart, and building a frequency distribution diagram, said frequency distribution diagram divides the high and low price of said bar into a plurality of discrete predetermined price intervals, and said frequency distribution diagram records the amount of trading activities taken place in each of the said discrete price intervals within the period of time represented by said bar;

   (c) deriving a set of discrete intra-market elements from said frequency distribution diagram, said set of discrete intra-market elements comprising at least one of a continuous price range containing substantially high trading activities, a price interval containing the highest trading activities, and a continuous price range containing substantially low trading activities.

   (d) graphically representing each element of said set of intra-market elements by a symmetrical geometric figure, and overlaying said geometric figure onto said bar; and,

   (e) displaying the overlaid price-time chart to the user.

2. The method of Claim 1(b), wherein said trading activities defined on a price interval is the total volume traded within the price interval throughout the period of time represented by said bar.

3. The method of Claim 1(b), wherein said trading activities defined on a price interval is the number of predetermined constant time units the market trades at least once within the said price interval throughout the time period represented by said bar, and wherein each said predetermined constant time unit represents a time interval substantially smaller than the time interval represented by said bar;

4. The method of Claim 1(a), wherein said price-time chart is a Bar Chart.

5. The method of Claim 1(a), wherein said price-time chart is a Japanese Candlestick Chart.

6. The method of Claim 1(a), wherein said price-time chart is a Bar Chart without at least one of the open and close price displayed.

7. The method of Claim 1(d), further comprises:

   graphically representing the price interval with the highest trading activities by a dot, said dot has the diameter substantially smaller than the physical length of a time interval on the X-axis of said price-time chart, said dot has the center being collinear with the high and low price of said bar, and the said dot has the Y-coordinate centered on the mid-point of said price interval;

8. The method of Claim 1(c), wherein said continuous price range with substantially low trading activities is a continuous price range with the top end being the high price of said bar, said continuous price range encompasses a set of price intervals on the frequency distribution diagram, and each price interval of said set of price intervals contains trading activities below a predetermined amount;

   and the step of 1(d) further comprises:

graphically representing said continuous price range on said bar by a geometric figure.

9. The method of Claim 9, wherein said geometric figure is a vertical line with a predefined width and color connecting the high and low of said price range, said vertical line is overlaid on an imaginary line joining the high and low price of said bar;

10. The method of Claim 1(c), wherein said continuous price range with substantially low trading activities is a continuous price range with the bottom end of the range being the low price of the bar, said continuous price range encompasses a set of price intervals on the frequency distribution diagram, and each price interval of said set of price intervals contains trading activities below a predetermined amount;

and the step of 1(d) further comprises:

graphically representing said continuous price range with substantially low trading activities on said bar by a geometric figure.

11. The method of Claim 10, wherein said geometric figure is a vertical line with predetermined width and color connecting the high and low price of said price range, said vertical line is overlaid on an imaginary line joining the high and low price of said bar.

12. The method of Claim 1(d), further comprises:

graphically representing at least one continuous price range with substantially high trading activities by a geometric figure and overlaying said geometric figure onto said bar , said geometric figure is a rectangle with a predetermined width and length, said rectangle has vertices with Y-coordinates enclosing said continuous price range with substantially high trading activities, and said rectangle has the center being collinear with the high and low price of said bar;

13. The method of Claim 12, further comprises a coloring scheme wherein said rectangle is hollow if the close price is higher than open price of said bar, and is filled if the close price is lower than open price of said bar.

14. The method of Claim 12, wherein said price-time chart is a Japanese Candlestick Chart and said rectangle has an identical width with the body of said bar, said rectangle contains a pattern to distinguish it from the body of said bar.

15. The method of Claim 14, wherein said pattern is a slanted stripe pattern.

16. The method of Claim 1, wherein said continuous price range containing substantially high trading activities is derived by steps comprising:

(a) calculating the mean price of the price distribution on said frequency distribution diagram, denoting the result by X;

(b) calculating the standard deviation price of the price distribution on said frequency distribution diagram, denoting the result by Y;

(c) defining said continuous price range to be the value $X \pm (Y)(b)$, wherein b is a predetermined constant.

17. The method of Claim 1, wherein said continuous price range containing substantially high trading activities is derived by steps comprising:

(a) fetching a predetermined constant, summing the total amount of trading activities in the frequency distribution diagram, multiplying said predetermined constant by the said total amount of trading activities, and denoting the result by X;

(b) said continuous price range containing substantial trading activities is the narrowest price range on the frequency distribution diagram which contain total trading activities larger than X;

18. The method of Claim 1(c), wherein said continuous price range containing substantially high trading activities consists of a set of discrete price intervals which comprises at least one price interval, said set of discrete price intervals contains average trading activities greater than a predetermined amount.

19. The method of Claim 1(c), wherein said continuous price range containing substantially high trading activities consists of a set of discrete price intervals which comprises at least one price interval, each price interval inside said set of discrete price intervals contains trading activities greater than a predetermined amount.

20. The method of Claim 1, wherein the step of 1(b) further comprises:

taking each of the bars from the said chart, and plotting a frequency distribution diagram for each bar;

and the step of 1(c) further comprises:

for each of the bars, deriving set of intra-market elements from the corresponding frequency distribution diagram, said set of intra-market elements comprise at least one intra-market element;

and the step of 1(d) further comprises:

graphically representing each intra-market element of said set of intra-market elements by a geometric figure and overlaying said geometric figure onto the bar.

21. The method of Claim 1, wherein said frequency distribution diagram is built internally by the computer and is not displayed to the user, while the price-time chart with the overlaid intra-market elements is displayed to the user.

22. The method of Claim 1, further comprises:

Allowing the user to select the set of intra-market elements to be overlaid on said price-time chart.

23. The method of Claim 1, further comprises:

Allowing the user to define the geometric figure used to represent an intra-market element.

24. An apparatus of charting price movements in a financial market with a given timeframe, comprising:

a storage device; and

a processor connected to the storage device,

the storage device storing

a program for controlling the processor; and

the processor operative with the program to:

(a) receive a chart display request from a user;

(b) display a price-time chart which is one of the Bar Chart, the Japanese Candlestick Chart, the Bar Chart without the open price displayed, the Bar Chart without the close price displayed, and the Bar Chart without both the open and close price displayed;

(c) take at least one bar from said price-time chart and gather a set of data pairs, said set of data pairs includes at least one data pair, and said data pair consists of a price interval and the trading activities taken place inside said price interval within the time period associated with said bar;

(d) based on said set of data pairs, derive a set of intra-market elements which include at least one of a price range with substantially high trading activities, a price range with substantially low trading activities, and a price interval with the highest trading activities;

(e) graphically represent each intra-market element from said set of intra-market elements by a geometric figure and overlay said geometric figure on said bar of said price-time chart; and,

(f) display the overlaid price-time chart to the user.

25. The apparatus of Claim 24(d), wherein said trading activities defined on a price interval is the total volume traded within the price interval throughout the period of time represented by said bar.

26. The apparatus of Claim 24(d), wherein said trading activities defined on a price interval is the number of predetermined constant time units the market trades at least once within the said price interval throughout the time period represented by said bar, and wherein each said predetermined constant time unit has a time interval substantially smaller than the time interval represented by said bar.

27. The apparatus of Claim 24(d), wherein the step of deriving a set of intra-market elements includes building a frequency distribution diagram, said frequency distribution diagram divides the high and low price of said bar into a plurality of discrete predetermined price intervals, and said frequency distribution diagram records the amount of trading activities taking place in each of the said discrete price intervals within the period of time represented by said bar.

28. The apparatus of Claim 24(e), further comprises:

representing a price interval with the highest trading activities computed from step 24(d) by a dot, said dot has the diameter substantially smaller than the physical length of a time interval on the X-axis of said price-time chart, said dot has the center being collinear with the high and low price of said bar, and said dot has Y-coordinate centered on the mid-point of said price interval.

29. The apparatus of Claim 24(d), wherein said continuous price range with substantially low trading activities is a continuous price range with the top end of the range being the high price of said bar, and each price in said price range contains trading activities below a predetermined amount;
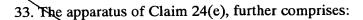
and the step of 24(e) further comprises:

graphically representing said continuous price range by a geometric figure and overlay said geometric figure on said bar of said price-time chart.

30. The apparatus of Claim 29, wherein said geometric figure is a vertical line with predetermined width and color connecting the high and low price of said price range, said vertical line is overlaid on an imaginary line joining the high and low price of said bar.

31. The apparatus of Claim 24(d), wherein said continuous price range with substantially low trading activities is a continuous price range with the bottom end of the range being the low price of said bar, each price inside said continuous price range contains trading activities below a predetermined amount;

and the step of 24(e) further comprises:

graphically representing said continuous price range with substantially low trading activities on said bar by a geometric figure and overlay said geometric figure on said bar of said price-time chart.

32. The apparatus of Claim 31, wherein said geometric figure is a vertical line with predetermined width and color connecting the high and low price of said price range, said vertical line is overlaid on an imaginary line joining the high and low price of said bar.

33. The apparatus of Claim 24(e), further comprises:

graphically representing at least one continuous price range with substantially high trading activities by a geometric figure and overlaying said geometric figure onto said bar, said geometric figure is a rectangle with a predetermined width and length, said rectangle has vertices with Y-coordinates enclosing said continuous price range with substantially high trading activities, and said rectangle has the center being collinear with the high and low price of said bar.

34. The apparatus of Claim 24(e), further comprises a coloring scheme which distinguishes whether said bar has the close price above the open price.

35. The apparatus of Claim 33, wherein said price-time chart is a Japanese Candlestick Chart and said rectangle has an identical width with the body of said bar, said rectangle contains a pattern to distinguish it from the body of said bar.

36. The apparatus of Claim 35, wherein said pattern is a slanted stripe pattern.

37. The apparatus of Claim 24(d), wherein said continuous price range containing substantially high trading activities is derived by steps comprising:

(a) sampling a set of prices and the total trading activities taking place throughout the time period associated with said bar for each price of said set of prices;

(b) based on the price-activity distribution from said sampling step, computing a first price X which is one of the mean, the median, and the mode of said distribution;

(c) computing a second price Y which is the standard deviation price of said distribution;

(d) defining said continuous price range containing substantially high trading activities to be equal to $X \pm (Y)(b)$ wherein b is a predetermined constant.

38. The apparatus of Claim 24(d), wherein said continuous price range containing substantially high trading activities is derived by the steps comprising:

identifying the narrowest continuous price range on said bar containing trading activities greater than a predetermined ratio of total trading activities for all prices on said bar.

39. The apparatus of Claim 24(d), wherein said continuous price range containing substantially high trading activities encompasses a set of price intervals, said set of price intervals comprises at least one price interval, each price interval inside said set of price intervals is traded at least once by the market within the time period associated with said bar, and said set of price intervals has average trading activities greater than a predetermined amount.

40. The apparatus of Claim 24(d), wherein said continuous price range containing substantially high trading activities encompasses a set of price intervals, said set of price intervals comprises at least one price interval, each price interval inside said set of price intervals is traded of at least once by the market within the time period associated with said bar, and each price interval in said set of price intervals contains trading activities greater than a predetermined amount.

41. The apparatus of Claim 24, further comprises:

for each bar in said price-time chart, derive a set of intra-market elements which comprises at least one price range with substantially high trading activities, a price range with substantially low trading activities, and a price interval with the highest trading activities, and graphically overlaying each of the set of intra-market elements on the associated bar in said price-time chart by means of a geometric figure.

42. The apparatus of Claim 24, further comprises means for updating said price-time chart in a real-time environment.